Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte DENIS MESMER, MARTIN HAWLAS,
ANSGAR NONHOFF and EGBERT SCHOLZ

Appeal No. 2002-1970
Application No. 09/072,333

ON BRIEF

Before ABRAMS, STAAB and BAHR, Administrative Patent Judges.

BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 3-9 and 11-13, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellants' invention relates to a method and device for measuring the length of bales in a baler for harvesting crops. Representative claims 1 and 9 are reproduced below in the opinion section of this decision.

The examiner relied upon the following prior art references in rejecting the appealed claims:

Bergvall et al. (Bergvall)	4,398,348	Aug. 16, 1983
McPherson	5,855,166	Jan. 5, 1999 (filed Feb. 28, 1997)

The following is the sole rejection before us for review.

Claims 1, 3-9 and 11-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McPherson in view of Bergvall.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the answer (Paper No. 12) for the examiner's complete reasoning in support of the rejection and to the brief and reply brief (Paper Nos. 11 and 13) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Independent claims 1 and 9 read as follows:

> 1. In a square baler for baling harvested crops and having a pick-up device, a feeding channel, a baling chamber, a baling ram for forming a crop bundle in the baling chamber, and a tying apparatus for tying the crop bundle and forming a bale; the improvement comprising:
>
> sensing means including a symmetrical measuring wheel for sensing both forward and backward movements of the crop bundle in the baling chamber;
>
> means for determining an actual length value of the crop bundle and triggering the tying apparatus when a pre-set length for the crop bundle is reached; and
>
> the sensing means including an electronic measuring device which measures, via the rotational movement and the direction of rotation of the measuring wheel, the forward and backward movements of the crop bundle in the baling chamber.
>
> 9. A baling method for controlling the length of a square bale, comprising the steps of:
>
> providing a measuring wheel;
>
> sensing the measuring wheel's rotary movement and direction of rotation and thereby sensing both the forward and backward movement of a crop bundle in a baling chamber;
>
> adding the measured forward and backward movements of the crop bundle to determine an actual length of the crop bundle;
>
> and triggering a tying device once a pre-set target length value is reached to tie the crop bundle into a bale.

McPherson, the jumping-off point in the examiner's rejection, discloses a retrofit measuring device for a baler of the type recited in claim 1 which measures the length of the hay bale, determines when the bale being formed has reached a predetermined size and actuates a tying mechanism on the baler. The measuring and actuation

device of McPherson comprises a star wheel 44 which contacts the hay bale and rotates as the bale is formed, a measuring wheel 45, coaxial with and spaced apart from the star wheel, a rotation detecting device for detecting the rotation of the measuring wheel and generating the bale measuring signal 70, and a control and display module 73 for inputting the desired bale length and for actuating a signal 77 when the bale reaches the desired size to trigger the tying mechanism 64. McPherson does not disclose a means for or step of sensing both the forward and backward movements of the crop bundle (bale), as called for in claims 1 and 9.

To overcome the above-noted deficiency of McPherson, the examiner relies on the teachings of Bergvall of a device for measuring movement of material using a wheel rolling on the material. Bergvall's invention

> relates to a device for measuring distance and converting a number representing the measured distance to a digital form. The invention is especially adapted for use in a machine for measuring distances on a workpiece to be treated in a machine such as a sewing machine, and for guiding the operation of the machine during feeding of the workpiece, e.g., the forming of a fancy seam in a sewing machine [Bergvall, column 1, lines 6-13].

Specifically, Bergvall discloses a toothed wheel 14 which rotates freely on a pin 15 and follows the motion of the cloth forwards as well as backwards. As explained in column 2, line 22, et seq., the direction and degree of rotation of the wheel 14 is measured and input to a control device which controls the feeding of the cloth so as to stitch, for example, a buttonhole.

Appellants argue that the examiner's obviousness rejection is improper because Bergvall is non-analogous art. For the reasons which follow, we agree with appellants.

As explained in In re Clay, 966 F.2d 656, 658-59, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992), a prerequisite to a finding of obviousness

> is determining what is "prior art," in order to consider whether "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103. Although § 103 does not, by its terms, define the "art to which [the] subject matter [sought to be patented] pertains," this determination is frequently couched in terms of whether the art is analogous or not, i.e., whether the art is "too remote to be treated as prior art."

Two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. Id. See also In re Deminski, 796 F.2d 436, 442, 230 USPQ 313, 315 (Fed. Cir. 1986); In re Wood, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979).

Even giving the teachings of Bergvall and appellants' invention their broadest reading and application, they cannot reasonably be considered to be within the same field of endeavor so as to satisfy the first criterion for analogous art. Bergvall is directed to a device for measuring distances on a workpiece to be treated by a machine and for

guiding operation of the machine during feeding of the workpiece (column 1, lines 6-12) and thus is not from within appellants' field of endeavor, namely, formation of crop bundles or bales.

Moreover, Bergvall is concerned with monitoring the distance and direction of feed of the workpiece, for example, cloth in a sewing machine, and does not address appellants' problem of measuring the length of a product, namely, a crop bale, and taking into account re-expansion of the bale as the ram is withdrawn. There is no mention in Bergvall of a concern about expansion or extension of the cloth or workpiece discussed therein. Thus, it is not apparent to us why one of ordinary skill in the art of crop baling would have looked to a reference such as Bergvall, concerned with monitoring and control of workpiece feeding within a machine, to solve appellants' problem of accurately measuring the length of a crop bale as it is formed in a baler. Accordingly, we agree with appellants that Bergvall also fails to meet the second criterion for analogous art.

In any event, even if Bergvall were considered to be analogous art, we find no suggestion from the teaching therein of a feed monitoring and control system to modify the bale length measuring device of McPherson. In particular, neither of the applied references recognizes a need or desirability to take into account both forward and backward movement of the crop bundle in the chamber in McPherson's device.

For the foregoing reasons, we conclude that the combined teachings of McPherson and Bergvall are insufficient to establish that the differences between the subject matter of claims 1 and 9 and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art. It thus follows that we shall not sustain the rejection of claims 1 and 9 or claims 3-8 and 11-13 depending therefrom.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1, 3-9 and 11-13 under 35 U.S.C. § 103(a) is reversed.

REVERSED

NEAL E. ABRAMS Administrative Patent Judge	)
LAWRENCE J. STAAB Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
JENNIFER D. BAHR Administrative Patent Judge	)

ROBERT E. MUIR
HUSCH & EPPENBERGER
401 MAIN STREET, SUITE 1400
PEORIA, IL 61602-1241